

A NOTE ON THE BIRDS IN THE NEIGHBOURHOOD OF MHOW.

BY

REV. F. S. BRIGGS.

The following notes are mainly from my own observations, made while stationed at Mhow, Central India, from March 1927 to October 1929, but, for the sake of completeness, I have added whatever notes on this area I have been able to find elsewhere.

My thanks are due to Mr. Hugh Whistler for identifying many of my specimens, and for checking my identification of others, also for many valuable suggestions. I also wish to thank General Betham for information with regard to certain species of birds which he found breeding near Mhow.

Most of these notes refer to the country within twelve miles of Mhow, but I have also included a few observations made at a greater distance, particularly in the neighbourhood of Barwani in the Narbadda Valley.

The country round Mhow falls into two divisions. First, the Vindhya Hills. Secondly, the Malwa Plateau. The Vindhya Hills are mostly covered with jungle, and intersected by deep and steep-sided ravines. The Plateau is largely under cultivation, but there are also on it stretches of rolling grass-land, particularly where it merges into the Vindhyan range.

The Raven. *Corvus corax* (Linn).

One seen in barracks at Mhow, 2-10-28.

The Jungle Crow. *Corvus coronoides* Gould. ♀ 7-2-28, ♂ 9-2-28.

Common in every type of country, but the majority seem to leave the Cantonment for breeding purposes. A nest containing fully fledged young was found on June 29, but young birds able to fly were seen as early as May 5.

The Indian House Crow. *Corvus splendens splendens* (Vieill.).

Commoner than the last species in Cantonments, less common away from houses, but, like the last species, many appear to leave the Cantonment area to breed. Eggs are laid in June. One was seen with a white crescent on the throat and a narrow white line round the neck, the latter concealed except when the bird stretched its neck, 23-8-27.

The Indian Tree-Pie. *Dendrocitta rufa* (Latham). ♂ 7-9-27.

Common at all times in scrub jungle. In winter a fair number invade the Cantonment.

Grey Tit. *Parus major mahrattarum* Hartert. ♀ 5-3-28, ♂ 2-7-28.

The former specimen was obtained from a flock of four or five, the latter was alone, and was in full breeding condition. Both specimens were obtained at the foot of the Vindhya Hills.

The Yellow-checked Tit. *Macrolophus xanthogenys* (Vigors).

This species is fairly common. Most of them appear to leave the Cantonment during May, June, and July, presumably for breeding. During the rest of the year they are common garden birds. A nest was found on June 29 about forty feet up a Peepul outside the Cantonment. Young birds left the nest the following day.

The Chestnut-bellied Nuthatch. *Sitta castaneiventris* (Frank). Jerdon states (*Birds of India*, Vol. I, p. 386) that this species occurs 'In the Vindhyan Range of Hills.' I did not observe it.

The Jungle Babbler. *Turdoides terricolor* (Hodgs.). ♂ 28-7-27, ♂ 29-3-28, ♀ 9-11-28.

Fairly numerous within the Cantonment; only occasionally seen elsewhere. They seem to form strong local attachments. In some gardens, one can be fairly certain of seeing a flock of them, while there are other gardens which they never seem to enter. One flock, also, is always to be seen in jungle about a mile below Simrole, though, as a rule, they belie their name by rarely being seen in jungle. They breed throughout the rains, and possibly at other times of the year as well, but most eggs appear to be laid in July. The three above-cited specimens are intermediate between *T. t. terricolor* and *T. t. indianus*, but nearer the latter than the former.

The Common Babbler. *Argya caudata caudata* (Dumont). ♀ 30-1-28.

This species is singularly scarce, and local in its distribution. In the swamp below the bund at Bircha, a flock is always to be found, and I have seen pairs further up the Bircha Valley, and by the Ghambier River for about six miles below its source in the above-mentioned swamp. I have seen them nowhere else near Mhow, though they are common in the Narbadda Valley, especially near Barwani. Eggs found as early as March 17, and young birds in the nest as late as October 24. All the nests found were in low date-palms, amongst the fronds, at the point where they spring from the trunk.

The Large Grey Babbler. *Argya malcomi* (Sykes).

Quite the most numerous member of the family near Mhow. It rarely, if ever, comes near houses, preferring scrub-jungle and roads lined with acacia trees. In scrub-jungle it is always the first bird to give warning of the approach of an intruder, and causes a good deal of annoyance to naturalists and sportsmen by alarming other species with its call. Its flocks sometimes number as many as forty, and flocks of twenty are common. Eggs are laid in February and March, and again after the breaking of the rains, in June and July. The majority of nests are situated in acacia trees, at any height up to fifteen feet from the ground. On August 5 a pair were seen with a juvenile Pied Crested Cuckoo, which was being fed by them on open ground near the village of Gowlipura. Jerdon states that this species is 'Rare at Mhow.' (*Birds of India*, Vol. II, p. 65.). There must have been an increase in the species since his day.

The Rufous-bellied Babbler. *Dumetia hypertythra* (Frankl.). ♂ 25-6-29.

The one specimen obtained was in full breeding condition. A few individuals of this species were seen on several occasions at different seasons in Jungle at the foot of the Vindhya Hills on the Northern side of the range, near the Bombay Road. None were noted elsewhere. The following is a quotation from *On the Birds of Central India*, by Lt.-Col. C. Swinhoe and Lt. Henry Barnes¹ (Ibis 1885, pp. 52-69; 124-138). 'At present we have obtained it' (i.e. *D. hypertythra*) 'at and in the vicinity of Mhow only, in March 1882 and December 1881.'

The Yellow-eyed Babbler. *Pycnorhis sinensis* (Gmel.). ♂ 5-3-28.

Resident in small numbers in the swampy ground below the bund at Bircha. Mixed flocks of this species and *Argya caudata* were seen there on several occasions.

The Central Indian Iora. *Ægithinia tiphia humei* Stuart Baker. ♂ (juv.) 5-8-27.

Not uncommon, but erratic in its appearance. It occurs both in gardens and in scrub jungle, but rather more often in the latter type of country than in the former. It breeds about the beginning of the rains, i.e. during the latter half of June and the first half of July, but males assume their breeding plumage in April. The male takes his share in the duties of incubation, and one was observed sitting on a nest and singing vigorously on June 25th.

¹ Henceforth referred to for brevity as S. & B.

Jerdon's Chloropsis. *Chloropsis jerdoni* (Blyth).

'Found at Mhow.' (Jerdon, Vol. II, p. 98.)

The Central Indian Red-vented Bulbul. *Molpastes hæmorrhous pallidus* Stuart Baker. ♂ 3-8-27, ♀ 13-2-28, ♂ 29-12-28, ♀ 25-2-29.

Numerous in every type of country except thick jungle. In winter, they gather in flocks up to a dozen or more in strength, but within the flocks, appear to keep largely in pairs. These flocks invade gardens during the winter, beginning to disintegrate early in March. A few individuals remain in gardens all the year, and breed there, but scrub jungle appears in this area to be their favourite type of country for breeding. Eggs found between May 6th, and September 5th. The subspecific name *pallidus* covers all birds intermediate between *intermedius*, *bengalensis* and *hæmorrhous*; but the Mhow specimens are nearer to *hæmorrhous* than to the two former races.

The Spotted-grey Creeper. *Salpornis spilonotus* (Frank).

Lt. Young states that he shot one near Mortakka on April 4th. (*J.B.N.H.S.*, Vol. XVI, p. 514).

The Northern Indian Pied Bush-Chat. *Saxicola caprata bicolor* (Sykes) ♀ 5-10-28, ♂ 27-10-28.

A winter visitor, not very numerous, seen chiefly in open country and swampy ground. Earliest and latest dates seen; September 23 and March 25. There seems to be some misconception about the status of this bird. The *Fauna*, (2nd edn., Vol. II, p. 27,) states:—'. . . is a resident almost throughout its habitat but it seems to leave its highest ranges in winter, and in some places moves locally from the plains to the adjacent hills for breeding purposes.' From my own small experience, its movements seem to be more marked than is here suggested. In the Peshawar valley it is mainly a summer visitor, though a few individuals spend the winter there. In the same area it has also a secondary movement from the Valley to the surrounding hills *after* breeding, and before moving south for the winter. Round Mhow it is, both on the Plateau and in the Vindhya Hills, purely a winter visitor. At Poona it is common in the winter, but leaves before the summer. There, however, the movement may be only local, as it breeds in considerable numbers round Khandala, less than forty miles away. Mr. Hugh Whistler states that 'It is a very marked summer visitor throughout most of the North-West, but here and there a few individuals are resident.' From these notes it appears to be very largely a migratory race.

The Stone-Chat. *Saxicola torquata* (Linn.). ♂ 12-12-27, ♀ 23-1-28, ♂? 14-9-28. (juv.).

A winter visitor, much more numerous than the last species.

It is to be found wherever there are not too many trees, but chiefly in swampy and rocky country. Earliest and latest dates seen: September 9, and March 25. The three species, none of which were obtained in swampy ground, belong to the race *indica*. But Jerdon states, (*J.*, Vol. II, p. 130), with reference to *Saxicola leucuroides* (= *Saxicola torquata leucura*), that it is 'Not uncommon about Mhow in the cold weather.' Both races, therefore, appear to occur.

The Pied Wheatear. *Ænanthe picata* (Blyth). ♂ 1-10-28.

The above-mentioned specimen, obtained about a mile south of Mhow on the Bircha Road, and a female seen a few weeks later on the road to Indore are the only records I have of the species in the area.

The Wheatear. *Ænanthe ænanthe ænanthe* (Linn.).

'I got a specimen near Mhow in the cold weather.' (*J.*, Vol. II, p. 132).

Gould's Desert Wheatear. *Ænanthe deserti atrogularis* (Blyth.) ♂ 10-2-28.

My only other record is of one seen about mile 14 on the Neemuch Road, 12-11-28. Jerdon, however, states (*J.*, Vol. II, p. 133):—'Common at Mhow in the cold weather.'

The Brown Rock-Chat. *Cercomela fusca* (Blyth).

A pair seen in Mhow itself 22-1-29. It seems strange that this should be the only record of so common a bird.

The Black Redstart. *Phoenicurus ochrurus phoenicuroides* (Moore).

A common winter visitor. Earliest and latest dates seen : Sept. 17 and April 10. This species seems to form strong local attachments. One can be fairly certain of seeing an individual within a few yards of certain trees, once one has learned where to look. The same trees are favoured year after year. Males always appear greatly to outnumber females. As the male is for the first year exactly like the female in appearance, and breeds in that immature dress, one would expect the reverse to be true. It would appear, therefore, that most of the females and immature males migrate to some other locality from that favoured by the males. They are very bold, and in the autumn of 1928 one frequently came into my bungalow to catch insects, and on one occasion was catching them in the church throughout the morning service, entirely undisturbed by the singing of the congregation.

The Eastern Red-Spotted Bluethroat. *Cyanosylvia suecica pallidogularis* (Saruday). ♀ 30-1-28.

Not uncommon, particularly in reed-beds, during the winter. It arrives late and departs early, its earliest and latest dates being Oct. 1 and Mar. 25.

The Brown-backed Indian Robin. *Saxicoloides fulcata cambaiensis* (Lath.).

Common and resident, in gardens, cultivation, and scrub-jungle. Eggs are laid in April, and probably up to the middle of June.

The Magpie Robin or Dayal. *Copsychus saularis* (Linn.).

This species is fairly common in gardens and cultivation. On several occasions I noticed the female singing to the male. No nest of the species was found, but very young birds, which had evidently only just left the nest, used to make their appearance in the middle of July. This species resents the presence of members of the last species in any garden in which it has taken up its abode, and does its best to drive them off, attacking them with great vigour.

The Dark Thrush. *Turdus obscurus* Gmel.

A bird which was taken for this species was seen on the Ghambier River on the outskirts of Mhow, on the evening of 2-2-29. This was during a spell of phenomenally cold weather which was making itself felt over the whole of Northern India. The bird seemed very tired, but I was unable to obtain it as a specimen, so the identification must be regarded with suspicion.

The Indian Blue Rock Thrush. *Monticola solitaria pandoo* (Sykes). ♀ 2-4-28.

A winter visitor in small numbers, in addition to which many pass through on the Spring migration. Females seem to be more numerous than males. Earliest and latest dates : Oct. 16 and Apr. 1.

The European Red-breasted Flycatcher. *Siphia parva parva* (Bechst.). ♂ 6-2-28.

Mainly a passage migrant in October and April, but a few seem to winter in the district. Red-breasted males are greatly in the minority. The one specimen obtained belonged to the typical race. Earliest and latest dates : September 24 and April 17.

Tickell's Blue Flycatcher. *Cyornis tickellii* (Blyth).

Not uncommon in the Vindhya Hills, both in scrub and in thicker jungle. General Betham took their eggs in the valley below Simrole in May. A pair were seen courting in the same valley in June.

The Verditer Flycatcher. *Stoparola melanops* (Vigors).

One seen in garden 30th November 1928. 'Mhow and Manpore are at present the only places where we have obtained it' (S. & B.).

The Brown Flycatcher. *Alseonax latirostris* (Raff.).

General Betham took the eggs of this species in the valley below Simrole. I did not see any birds of this species in the Mhow district, but a bird described to me by a careful observer appeared to belong to this species. S. & B. record having obtained a single specimen at Manpore.

The Paradise Flycatcher. *Terpsiphone paradisi* (Linn.).

This species seems to be resident in small numbers in the Vindhya Hills, and to occur as a passage migrant on the plateau. General Betham took eggs in the valley mentioned above. My own observations of the species are not very numerous, so may be given *in extenso*.

- 1927 Mar. 27. Male in mixed chestnut and white plumage opposite bung-alow.
 May 28. Several females by Simrole Road.
 Sep. 21. Numerous, both sexes, Jeshwantnagar.
 Oct. 12. Several below Simrole.
 1928 Apr. 5. One adult male, Indore.
 June 22. Female in Jungle about two miles S. of Simrole Road.
 Sep. 10. Females (or Juveniles) numerous at Jeshwantnagar.
 1929 Mar. 25. One adult male Bircha.
 June 12. Female by Ghambier River.
 July 3. Adult male with ribbon feathers missing, Fort *glacis*.
 Sep. 27. Female, Mile 7 on Bombay Road.

The White-browed Fantail Flycatcher. *Rhipidura aureola* (Less.).

Fairly common, and resident, but subject to local movement. In the spring and summer they are common along the road between Mhow and Simrole, and in the scrub-jungle to the south of the road, but do not appear to occur anywhere else in the district. During the winter they spread over the whole district frequently coming into gardens. On several occasions in the winter pairs of them were seen feeding with a flock of *Phylloscopus collybitus tristis*. Breeding appears to commence about the middle of February.

The Indian Grey Shrike. *Lanius excubitor lahtora* (Sykes). ♀ 17-6-27.

Seen at all times of the year, but in distinctly greater numbers in summer than in winter. It is mainly a bird of open grazing grounds and roads sparsely lined with trees, particularly *Acacia*. The one specimen obtained showed some signs of breeding, and a nest containing fresh eggs was found on April 17, but breeding appears to take place mostly in the rains.

The Bay-backed Shrike. *Lanius vittatus* (Valenc.). ♂ 21-12-28.

The one specimen obtained was in juvenile plumage. This is by far the commonest shrike about Mhow. It is even more numerous in winter than in summer. Breeds during the rains, and usually has two broods.

The Rufous-backed Shrike. *Lanius schach* (Linn.). ♂ 31-10-27; ♂ 28-11-27; ♀ 16-6-28.

The above specimens are all intermediate between *erythronotus* and *caniceps*, and cannot be assigned definitely to either race. Nests containing eggs found between June 16 and Aug. 20. All the nests found round Mhow were much less bulky and contained less wool than those I have seen in the Peshawar District and in Kashmir. The species is not very common about Mhow at any time, but there is a noticeable increase in numbers in the autumn.

The Brown Shrike. *Lanius cristatus* (Linn.).

Seen very occasionally in winter and early spring. Also recorded from Mhow by S. & B.

The Indian Common Woodshrike. *Tephrodornis pondiceriana pondiceriana* (Gmel.). ♂ 19-6-28, ♀ 15-10-1928.

Fairly numerous in scrub-jungle, but rather erratic in its appearances. Rarely seen in winter. One of the two specimens obtained on June 19 was a

juvenile which could not very long have left the nest, and was still being fed by its parents.

The Small Minivet. *Pericrocotus peregrinus* (Linn.) ♂ 26-10-27 ; ♀ 16-11-27.

Common and resident, but, like the rest of the minivets, wanders a good deal in small parties in search of food. It breeds in March, and apparently again in the earlier part of the rains. On one occasion a pair of females were seen fighting very fiercely for the favour of a male, who looked on with apparent interest, but took no part in the dispute.

The White-bellied Minivet. *Pericrocotus erythropygius* (Jerdon). ♀ 9-5-28.

This species was numerous on the road to Bircha on the day the specimen was obtained and two days later. It was occasionally seen again, each time either in spring or in autumn. It may therefore be regarded as a passage migrant only in this area.

The Large Cuckoo-Shrike. *Graucalus macei* (Less.).

Status uncertain. From September to May it is a common bird in gardens and in cultivated country wherever there are tall trees. Nearly always they are seen either in twos or threes, but I have one record of a flock of six. Between May and September I have only five records of this species in the area. They are as follows :—

- 1928 July 9. One in thick jungle, S. of Mhow, Simrole Rd.
- July 10. Do. do.
- 1929 June 11. Three seen beyond polo-ground.
- July 8. One in same place as previous July.
- Aug. 6. One west and one east of polo-ground.

The behaviour of those seen in July in both years suggested that they had nests, though I was unable to find them. On September 27, 1930, a pair were flying round what appeared to be a half-finished nest about forty feet up in a Peepul tree on the outskirts of Mhow. Twice while I watched, the female flew away with a little of the material of the nest in her bill. The next day all the material had disappeared. As it was in a position quite inaccessible to a human being it may be assumed that the birds had themselves removed it all. On October 5, a pair were seen courting vigorously in a tree at the side of a road in Indore. From the above observations it would seem probable that this species is mainly a winter visitor to the immediate neighbourhood of Mhow, and makes a local migration, probably to the jungles of the Vindhya Hills, for breeding, but that they may sometimes breed a second time later in the year on the plateau.

The Black Drongo or King Crow. *Dicrurus macrocercus* (Vieill.).

Numerous at all times, but even more numerous in winter than in summer. Breeds mainly in June and July.

The Ashy Drongo. *Dicrurus leucophæus* (Vieill.).

S. & B. procured specimens at Mhow in October.

The White-bellied Drongo. *Dicrurus cærulescens* (Linn.).

Only occasionally seen. It appears to be resident in small numbers, and is local in its distribution. The one place where one can generally be fairly certain of seeing several is over the river at Indore. Its notes are similar to those of the King Crow, but much less harsh than the usual call of the latter, and more like its softer, early-morning call.

Acrocephalus.

'A note on the Asiatic Members of the Genus *Acrocephalus*' by Mr. Hugh Whistler (The *Ibis*, July 1928, pp. 449-453) suggested the possibility that some members of that genus not yet recorded as breeding in the plains of India, may actually do so. Hence I spent some considerable time in reed-beds looking for the nests of Reed-Warblers. The results were interesting but inconclusive. A fringe of reeds grows along the side of the overflow from Bircha Lake. In these reeds I found the only trace in the

district of *Acrocephali* breeding. On August 5, 1928, there were two nests, both of them typical Reed-Warbler nests, in these reeds. One was slung between about four reed-stems; the other was attached to a reed-stem and to two or three thorny, upright branches. The former nest was empty, and the latter contained one egg, strongly reminiscent of the egg of *Sylvia alricapilla*. I left it in the hope that more would be laid, and that I might see the parent birds. On examining the nests a few days later, however, I found both empty. In 1929, I again kept my eye on the same fringe of reeds. In August, I again found a nest exactly similar in all respects to the nest I found in the preceding year. On August 9, when I was looking at it, a small bird which might quite well have been a Reed-Warbler was showing great anxiety in some bushes behind the nest. As the nest was empty, however, I went away at once so as not to frighten the owner. I visited the nest on several subsequent occasions, without, however, finding any eggs.

Pallas's Grasshopper Warbler. *Locustella certhiola* (Pall.).

Jerdon says that he met with it in 'Long grass in the neighbourhood of Mhow, during the rains.' (Jerdon, Vol. II, p. 159).

The Tailor-Bird. *Orthotomus sutorius* (Forst.).

Very common and resident. There appears to be at least one pair of these birds to every garden, besides which they are numerous in scrub-jungle. They breed from June to the end of September, and appear usually to have two broods. Some writers state that it is the hen Tailor-Bird that does all the work in building the nest. In the case of three nests built in my garden at Mhow, the male did the greater part of the work of sewing the leaves together, and each took a share in building the nest itself. Two nests built in the summer of 1929 were lined almost entirely with bits frayed off from a rope for opening and shutting one of the *roshandans* of my bungalow. The eggs were taken from the former of these nests, probably by a squirrel, and the male Tailor-Bird was seen removing a good deal of the lining to use on a second nest about twenty yards away.

The Streaked Fantail Warbler. *Cisticola juncidas* (Rafinesque). ♀ 30-1-28.

Fairly common, but rather erratic in its appearances and disappearances. It is generally to be seen at Bircha.

Franklin's Wren-Warbler. *Franklinia gracilis* (Frankl.). ♀ 15-8-27, ♂ 2-7-28.

Fairly common and resident. This species is chiefly found in bushes by the side of roads, and in gardens. Breeds in the rains. A pair seen feeding fairly well-grown young on 21-8-29.

The Rufous-fronted Wren Warbler. *Franklinia buchanani* (Blyth).

Jerdon states that he obtained a specimen near Mhow. (Jerdon, Vol. II, p. 187.)

The Booted Tree-Warbler. *Hippolais scita* (Eversm.). ♂ 4-4-28.

The above-cited specimen was excessively fat, suggesting that it was on the point of migrating. The species was not identified on any other occasion.

Hume's Lesser Whitethroat. *Sylvia althæa* Hume. ♀ 1-10-28.

This specimen was obtained from a flock of three or four. No other record.

The Desert Warbler. *Sylvia nana* (Hemp. & Ehr.).

'Found at Mhow.' (Jerdon, Vol. II, p. 209).

The Indian Lesser Whitethroat. *Sylvia curruca affinis* (Blyth). ♂ 31-10-27, ♀ 14-11-27.

Very numerous on passage in the spring and autumn, a considerable number also wintering in the neighbourhood of Mhow. It is chiefly found in open scrub-jungle with plenty of acacia bushes, but also occurs in gardens.

The Siberian Chiffchaff. *Phylloscopus collybita tristis* (Blyth). ♂ 28-12-27, ♂ 9-1-28.

Occurs fairly plentifully in winter in small flocks. On several occasions a flock of this species was seen following a pair of Fantail Warblers about and feeding with them. They occur in every type of country.

The Olivaceous Willow-Warbler. *Phylloscopus indicus* (Jerd.). 0? 15-10-28.

The above specimen was obtained from a flock feeding in trees near Jeshwantnagar. They ran about the trunks and branches searching the bark for insects in the manner of Tree-Creepers.

The Greenish Willow-Warbler. *Phylloscopus nitidus viridanus* (Blyth.) ♀ 10-9-28.

This specimen, obtained from a mixed flock of *Phylloscopi* feeding in the trees overhanging Jeshwantnagar Lake, is the only record.

The Streaked Wren-Warbler. *Prinia gracilis* (Licht.).

'Abundant on the Vindhya Mountains near Mhow.' (Jerdon, Vol. II, p. 172).

Stewart's Ashy Wren-Warbler. *Prinia socialis stewarti* (Blyth).

Fairly numerous and resident, rarely seen far from water. The only nests found were of the Tailor-Bird type, and always close to a stream. Breeds about the end of March and the beginning of April, and again in the rains (August).

The Indian Wren-Warbler. *Prinia inornata inornata* (Sykes). ♂ 29-7-27, ♀ 21-9-27, ♀ 8-6-28, ♂ 17-9-28.

Numerous and resident. It is always commoner near water than elsewhere, but also occurs in cultivation well away from water. Every nest found was close to water, the majority being either in reeds or in Mareetail. By far the greater majority of eggs are laid in the last fortnight in August, but a few are laid in September.

The Indian Oriole. *Oriolus oriolus kundoo* (Sykes).

This species occurs at all seasons, but is distinctly more numerous in spring and autumn than either in summer or winter. It breeds in May.

The Indian Black-naped Oriole. *Oriolus chinensis indicus* (Jerdon).

'One seen at Manpore in June 1882.' (S. & B.).

The Rose-coloured Starling. *Pastor roseus* (Linn.).

In March 1927 I saw several large flocks. In the two succeeding years their numbers were much smaller. Flocks were also seen four times in April, twice in February, and once in January. On 11-3-29 a mixed flock, consisting of five Common Mynahs and three Rose-coloured Starlings flew over the *glacis* of the fort.

The Black-headed Mynah. *Temenuchus pagodarum* (Gmel.).

Fairly numerous. There seems to be a slight increase in numbers before the breeding-season, which extends from the middle of April to the middle of June.

The Common Mynah. *Acridotheres tristis tristis* (Linn.). ♂ 28-7-27.

Very common and resident. Eggs laid about the middle of July. A young bird, not quite fledged, which had fallen from its nest was picked up in August 1928, brought up by hand till it was big enough to look after itself, and then released. It visited the bungalow daily till about April, generally timing its visits to coincide with meal-times. It showed a strong dislike to anything containing chocolate, but otherwise would eat anything, and its great partiality for all dairy products, especially cream and cheese, made it necessary to keep a very wary eye on those articles when he was about. He was entirely

fearless, and walked about the table during meals. In April he disappeared, but reappeared, rather to our surprise in September, continuing to haunt the house with the same persistence and fearlessness till we left Mhow at the end of October.

The Bank Mynah. *Acridotheres ginginianus* (Lath.).

'I got it at Mhow, . . . though rare, and on the banks of the Narbadda.' (Jerdon, Vol. II, p. 327).

The Baya or Weaver-bird. *Ploceus philippinus* (Linn.). ♂ ♀ 19-5-28, ♀ 26-12-28, ♂ ♂ 14-6-29, ♂ 29-6-29.

Common and resident. The ♂ obtained on 19-5-28 was just beginning to assume breeding plumage; the four specimens obtained on 14-6-29 were in varying stages of moult, but all nearly in complete breeding plumage; and the last specimen was in complete breeding plumage. Their second moult appears to take place immediately after breeding, but I obtained no specimens to illustrate it. Work on nests is begun before the end July, but the earliest date on which I have found eggs is September 7. The latest date on which I found eggs was October 1st. Several books state that there is never any lining in a Baya's nest. Every nest I examined in the neighbourhood of Mhow had at least a few feathers, and in several cases the eggs were resting on a thick mat of feathers. In one or two cases the feathers were white, but usually, they were pale grey.

The White-throated Munia. *Uroloncha malabarica* (Linn.). ♂ 3-8-27.

Resident, but subject to local movement in accordance with the supply of food. They breed irregularly from August to April, but the majority of eggs are laid in January and February.

The Green Munia. *Stictospiza formosa* (Lath.).

A few of these very beautiful little birds were seen in a large flock of Amadavats near Killod, South of Mhow, 8-6-28. Jerdon says (Vol. II, p. 361):—'Occasionally caught and caged . . . at Mhow.'

The Amadavat. *Amandava amandava* (Linn.).

A flock of about fifty seen near Killod, 8-6-28. No other record.

The Common Rose-Finch. *Carpodacus erythrinus* (Pall.). ♀ 9-11-28.

Winter visitors. A large flock seen 9-11-28, otherwise only one or two individual birds.

The Yellow-throated Sparrow. *Gymnoris xanthocollis xanthocollis* (Burton). ♀ 12-12-27; ♂ 20-2-28; ♂ 28-5-28; ♂ 19-6-28.

The status of this species is somewhat puzzling. About the end of February, they begin to build in considerable numbers, and by the end of April, young birds begin to appear. In May they cease to be evenly distributed over the countryside, and gather into flocks usually of about a dozen to twenty individuals. These flocks are seen mainly in scrub-jungle. Soon after the rains break, (i.e. about the end of June or beginning of July), they entirely disappear and I have only one record of the species in July, (9-7-29), and none at all for August or September. In 1927 the first occasion on which they were recorded after their departure in the early rains was November, 6th, two days after heavy and unseasonable rain. They were again seen on the 7th, 8th, 23rd, and 24th, of the month, each time in small parties. In December they were seen four times, each time in large flocks. In January they were fairly frequently seen, generally in smaller flocks than in the preceding month, and before the end of the month they were beginning to sing and fight. Throughout February they were very frequently seen but in very varying numbers, the impression given being that flocks of them were passing through the district, while some individuals were settling down to breed. A male shot on February 20, was in full breeding condition, and they were seen carrying building materials on February 29. In 1928 their appearance after the rains was earlier than in 1927. On October 19 and 20 they were very

numerous fifty miles south of Mhow, beyond the Narbadda River, and on the 21st, one was seen at Mhow. From that date till October 29 the notes correspond pretty closely with those already given. The above observations suggest that the breeding birds leave Mhow for the rains, and that there is an influx of other individuals of the species, possibly those which have bred in the Punjab, in the winter. If these winter visitors do come from the Punjab, however, they must delay a long time on the way, as they are amongst the first summer visitors to leave the Punjab.

The Indian House-Sparrow. *Passer domesticus indicus* (Jard. & Selby).

More numerous in the bazar than elsewhere, but by no means as numerous about Mhow as in many other parts of India. Breeds irregularly almost throughout the year.

The Grey-headed Bunting. *Emberiza fucata* Pall.

'Seen at Mhow.' (Jerdon, Vol. II, p. 276).

The Grey-necked Bunting. *Emberiza buchanani* Blyth. ♂ 6-2-28.

A pair were seen in scrub below the fort on April 25 and 26, 1929. Otherwise the above-cited specimen obtained in scrub near Bircha Lake, is my only record of this species.

The Red-headed Bunting. *Emberiza icterica* Eversm.

'Tolerably abundant at Mhow.' (Jerdon, Vol. II, p. 379).

The Crested Bunting. *Melophus melanicterus* (Gmel.).

Appears to be a summer visitor in considerable numbers to the Vindhya Hills. Only seen once in winter, 8-12-28, when a small party of one adult male and a few hens or immature birds were seen feeding in the long grass on the bund of Bircha Lake. General Betham states that he twice took the egg of *Cuculus canorus* from the nest of this species near Simrole.

The Sand Martin. *Riparia riparia* (Linn.).

'Saw it occasionally at Mhow.' (Jerdon, Vol. I, p. 163).

The Dusky Crag-Martin. *Ptyonoprogne concolor* (Sykes).

Fairly numerous in summer, much less so in winter. Eggs laid in August and September. Nests placed both on cliffs and buildings. Lt. Young found young birds of this species in nests in the Narbadda Valley in April (*J.B.N.H.S.*, Vol. XVI, p. 315). This suggests the question as to whether the species breeds twice; once in the Narbadda Valley in the spring, and once on the Plateau in the latter part of the rains.

The Common Swallow. *Hirundo rustica* Linn.

Occurs in immense numbers on passage in the autumn, and is occasionally seen throughout the winter. Only one record in the spring, *viz.* Indore, 12-3-27.

The Indian Wire-tailed Swallow. *Hirundo smithii filifera* (Stephens).

Resident in considerable numbers. Eggs found at various times between February 17 and September 25. The same nest was used in April and September 1927, and in February and May 1928. The last time the nest was used, it cracked off the cliff to which it was attached, presumably owing to the dry heat, when containing two young birds nearly ready to fly, but caught on a projecting root, where it remained till the young left some days later.

The Indian Cliff Swallow. *Hirundo fluviicola* Jerdon.

Occasionally seen, chiefly in winter. A very large colony breeds on the piers of the railway bridge over the Narbadda at Mortakka, about thirty miles from Mhow in July. Apparently they breed twice in the year in the Narbadda Valley, as Lt. Young (*J.B.N.H.S.*, Vol. XVI, p. 515), states that on April 9

he examined a colony of these birds, and found that most of the young had just left the nests.

Hodgson's Striated Swallow. *Hirundo daurica nepalensis* (Hodgs.). ♀ ♀ ♀ 25-1-29.

The three specimens were all *nepalensis*. The winter birds look different from the breeding birds, and probably belong to a different race. The breeding birds arrive in May, and breed during the latter part of the rains. Nests containing young having been found from August 25 to October 12. The one nest found on the latter date contained one nearly fledged bird, which appeared to have been deserted by its parents. During the latter half of October I have no record of this species for any of the three years. There is a great influx of Striated Swallows about the beginning of November, and they occur in large flocks during that month, December and January. No records of the species for February, March, or April.

The Indian White Wagtail. *Motacilla alba dukhunensis* (Sykes). ♀ 7-11-27, ♀ ♀ 5-10-28.

The commonest of the migratory Wagtails. They are to be seen in immense numbers every evening in the winter on the polo-ground, where they appear to be entirely undisturbed by any match which may happen to be in progress, merely flying up when the ponies approach very close to them, and settling again at once. About sunset they fly off in flocks in a south-easterly direction. Earliest and latest dates seen : September 21, and April 7.

The Masked Wagtail. *Motacilla alba personata* (Gould).

One seen on the roof of the post office, 6-12-28.

The Large Pied Wagtail. *Motacilla maderaspatensis* (Gmel.).

Several pairs are resident at Bircha, where they breed in a punt and on the pumping station in the hot weather, and the rains. Rarely seen elsewhere.

The Grey Wagtail. *Motacilla cinerea* Tunstall.

Presumably this is *caspica*, but no specimen was obtained. This is usually the earliest of the migrant Wagtails to arrive, and the latest to depart. Earliest and latest dates September 6 and April 29. On 13-9-27, one adult and two juveniles were seen together. This is the least social of the migratory Wagtails, never occurring in large flocks. Individual birds seem to occupy a certain very restricted area for the winter, and, once they have settled down, may be seen daily in the same place.

The Indian Blue-headed Wagtail. *Motacilla flava beema* (Sykes). ♀ 1-10-28, ♂ 5-10-28, ♂ 24-10-28, ♂ 30-11-28.

Seen from the end of September till March. They occur in flocks, generally near water and in swampy ground, but sometimes on dry pasture-land. Frequently they are found in mixed flocks with *M. alba*. They appear to roost in great numbers on the open ground on One Tree Hill. Considerably more numerous on the autumn passage than, later on, in the winter or on the spring passage.

The Western Yellow-headed Wagtail. *Motacilla citreola veræ* Buturlin. ♂ 7-11-27, ♂ 4-1-28, ♂ 25-3-29.

Winter visitors, arriving about the end of September or beginning of October, but no exact dates recorded, as it is by no means easy to distinguish between this species and the last in the field. This species never appears to occur on large flocks, or away from water, and is chiefly seen on the margins of tanks and ponds. Most of the males are in breeding plumage by the end of March, and leave early in April, but one was seen by Bircha Lake on 11-5-28 which had not completely assumed breeding plumage.

The Tree-Pipit. *Anthus trivialis trivialis* (Linn.). ♂ 5-12-27, ♂ 27-1-28, ♀ 30-1-28, ♂ 6-2-28.

A very common winter visitor, found in every type of country except swamp and thick jungle. It is very common in gardens. Earliest and latest dates, September 26 and April 13. During the greater part of its stay in the district, it is found in small flocks, but the flocks break up into pairs during the last month before departure.

The Persian Rock-Pipit. *Anthus sordidus decaptus* Meinertz. ♂ 28-12-28.

The single specimen obtained seems to belong to this race. It is occasionally seen in winter, occurring either singly or in pairs. It frequently perches on the top of haystacks. Open grassland was the only type of country in which it was seen. Very shy and difficult to approach.

Richard's Pipit. *Anthus richardi richardi* (Vieill.). ♂ 28-11-27.

The above specimen was obtained near Killod, about three miles from Mhow. No other record.

The Indian Pipit. *Anthus richardi rufulus* (Vieill.). ♀ 29-7-27; 0? 24-8-27, ♂ 13-2-28; ♀ 4-4-28; ♀ 11-5-28; ♀ 28-12-28.

Numerous and resident, breeding in the rains. Occurs in all types of open country. In the Narbadda Valley, Lt. Young found three much incubated eggs of this species on April 9. (*J.B.N.H.S.*, Vol. XVI, p. 515).

The Eastern Tawny Pipit. *Anthus campestris griseus* Nicoll. ♂ 14-2-29.

This specimen was obtained about three miles east of Mhow. I have no other record, but Jerdon describes it as 'Abundant at Mhow.' (Jerdon, Vol. II, p. 235).

The Yarkand Short-toed Lark. *Calendrella brachydactyla longipennis* (Eversm.). ♀ 12-11-28.

The above specimen was obtained from a very large flock on open ground about fourteen miles west of Mhow, and is the only record. The birds were very wild and difficult to approach.

The Red-Winged Bush-Lark. *Mirafra erythroptera erythroptera* (Jerdon). ♀ 20-8-27; ♂ 16-9-27; ♀ 23-1-28; ♂ ♀ 1-6-28; ♂ 16-6-28.

Fairly numerous and resident, keeping to the broken ground in the neighbourhood of the Vindhya Hills. It is mainly a bird of open grassland, but is also met with in fairly open scrub-jungle. Breeds in the rains. Jerdon states that he 'did not find it at Mhow.' (Jerdon, Vol. II, p. 419).

Sykes' Crested Lark. *Galerida deva* (Sykes). ♂ 8-8-27, ♂ 16-9-27, ♀ 27-3-28, ♀ 26-5-28, ♀ 8-6-28, ♂ 11-6-28. ♂ 31-8-29.

Chiefly, if not entirely, a summer visitor. One Crested Lark was seen in the winter, but I was not certain to which species it belonged. From March to September it is common in open, and often in swampy country. A nest containing two fresh eggs was found in the shelter of two stones in a stubble-field on 10-8-29.

The Indian Rufous-tailed Finch-Lark. *Ammomanes phoenicura phoenicura* (Franklin). ♂ 23-11-27, ♂ ♀ 27-2-28, ♀ 1-6-28.

Very numerous, sometimes in large flocks and sometimes singly, in winter. About March the numbers are reduced considerably, but some may be seen throughout the year. Of the two specimens obtained on 27-2-28, the male was in full breeding condition, and the ova of the female were beginning to enlarge. Jerdon says of this species:—'I have seen it north of the Narbadda, at Mhow and Saugor, but rare.' (Jerdon, Vol. II, p. 422).

The Pale Ashy-grey Finch-Lark. *Pyrhulauda grisea siccata* (Ticehurst). ♂ 20-2-28, ♀ 3-9-28.

Breeds in March and April on open, dry grassland. During the rest of the year they keep mainly to the same type of country, but are occasionally seen in cultivation in small flocks.

The White-eye. *Zosterops palpebrosa* (Temm.).

This species is very erratic in its appearances. It occurs at all seasons, but is rarely seen except after rain has fallen. Whether this is only because rain, by bringing out the insects, makes it more lively and therefore more noticeable, or whether there is some local movement, is uncertain. The same phenomenon is noticeable at Peshawar.

The Purple Sunbird. *Cinnyris asiatica asiatica* (Latham). ♂ 9-7-28.

Common in gardens and scrub-jungle. The majority of the species appear to leave the neighbourhood during the rains, gradually returning during the autumn. The species is notoriously irregular in its plumage-changes, but in this area the majority of the males seem to have adopted their non-breeding plumage by the beginning of August, and to have reassumed their breeding plumage by the end of November. The one specimen obtained was moulting from breeding into non-breeding plumage. Nests containing fresh eggs found between March 3 and June 25. Eggs are incubated for thirteen days. A nest containing two eggs was found on 14-3-29. The eggs hatched, and the young were successfully reared. On May 1, seeing a Sunbird again visiting the same nest, I examined it, and found that it contained one freshly hatched chick. There was no trace of a second chick or egg.

The Thick-billed Flower-Pecker. *Piprosoma squalidum squalidum* (Burton). ♀ 2-11-28.

This specimen was shot from a party of three or four in scrub-jungle. No other record.

The Indian Pitta. *Pitta brachyura* (Linn.).

Not observed, but General Betham took its eggs in the valley below Simrole.

The Golden-fronted Pied Woodpecker. *Leiopicus mahrattensis* (Lath.). ♂ 25-6-28, ♀ 8-10-28.

All three specimens are intermediate between the northern and southern races. Resident. Found alike in gardens, cultivation, along tree-fringed roads, and in scrub-jungle. A nest found on March 21, in a hole in an acacia, about twelve feet from the ground, contained one hatching egg, one addled, and two infertile. One of the parent birds went off when the operation of cutting into the nest with an adze was begun, but the other did not leave till the excavation was completed and she was being handled.

The Golden-backed Woodpecker. *Brachypternus benghalensis* (Linn.).

Resident, in smaller numbers than the last species.

The Black-backed Woodpecker. *Chrysocolaptes festivus* (Bodd.).

Jerdon states that this species occurs 'in the Vindhyan Mountains near Mhow'. (Jerdon, Vol. I, p. 283.)

The Wryneck. *Iynx torquilla* (Linn.). ♀ 17-3-28, ♂ 30-9-28.

Appears to occur mainly as a passage migrant in spring and autumn, though some may stay through the winter. Earliest and latest dates Sept. 30 and Mar. 17.

The Northern Green Barbet. *Thereiceryx zeylanicus caniceps* (Franklin).

Occurs in 'the jungles of the Vindhyan range of hills' (Jerdon, Vol. I, p. 311).

The Coppersmith. *Xantholæma hæmacephala lutea* (Lesson). ♀ 20-2-29.

The above-cited specimen was obtained in rather an unusual way. Seeing two jungle crows pecking at a Coppersmith on the ground I drove them off, and picked up the Coppersmith, apparently little the worse, though unable for the time being to fly. However, in an hour or two it died. The species is resident, and very numerous in the gardens of bungalows. It also occurs, though in smaller numbers, in scrub-jungle and cultivation. The majority of eggs appear to be laid in April, but work on the nest-cavity begins as early as January. During the earlier part of the work of excavation, the birds only work on the warmer days, a cold spell or a shower at once stopping work. Rain at once silences this species, but if there is a break of a few days in the monsoon it recommences calling at once, though not with quite the same energy it shows in the hot weather.

The Common Cuckoo. *Cuculus canorus* (Linn). ♂ 10-7-28 ; ♂ 30-7-28 ; ♂ 24-6-29.

All three specimens appear to be intermediate between *C. c. canorus* and *C. c. telephonus*, but nearer to the latter than to the former. The status of this species in the neighbourhood of Mhow is somewhat puzzling. It calls vigorously through June and July, chiefly in scrub-jungle in the neighbourhood of the Vindhya Hills, but also to a less extent within the Cantonment itself. I have never heard or seen the species on the plateau north of Mhow. Apart from the two months mentioned, I have only seen it three times, twice in September, and once in November. On each of these three occasions, it was seen just beyond the polo-ground. The *Fauna* (Second edition, Vol. IV, p. 137) says :—'Betham found it breeding in the broken country near Mhow.' General Betham kindly enlarged on this statement in answer to my queries as follows :—'I only twice got an egg of the Cuckoo, both times from the nest of the Black-crested Bunting. One nest was situated on the roadside, where the road had been carved out of the side of the hill, and the other on the ground. These Buntings were very common on the ghat below Simrole.' This did not seem to me quite conclusive, the more so as *Cuculus micropterus* is numerous on 'the ghat below Simrole'; so I shot three Cuckoos and examined their organs. The specimens were all calling vigorously when shot, though the first two were in moult, a condition in which birds do not usually breed. Most species of birds are silent when moulting. In both these cases the organs were somewhat enlarged. The third specimen had just mated with a hen when shot, and almost before the body could be picked up the hen was favourably receiving the attentions of another male Cuckoo. This last specimen was in breeding condition. Both in 1928 and 1929 it was a very common sight in the scrub-jungle immediately south of the Mhow-Simrole Road to see Cuckoos engaged in vigorous courtship. They are so numerous in June and July that the fact that they were only observed three times during the rest of the year, and then not in the locality where they were common in the summer, suggests that they are mainly, if not entirely, summer visitors. The three individuals seen in the autumn may well have been migrating from further north. The note of the Cuckoos round Mhow varies slightly from the note of the Cuckoo in England. In both England and Central India the interval between the two parts of the Cuckoo's call varies, but whereas in England it appears to vary normally between a major and a minor third, in the neighbourhood of Mhow it varies between a minor third and a major second. The variation is not merely between individual birds, but may be noted in the call of the same bird. When beginning to call, the Cuckoo generally employs the larger interval, but when it has been calling continuously for some minutes, it appears to get tired and occasionally employs the smaller interval. Some individuals seem to use the smaller interval almost all the time. The following two quotations bear on the subject of Cuckoos in the Mhow area. 'I have seen it at.....Mhow (where very common in the rains, frequenting bushes on grassy plains).' (Jerdon, Vol. I, p. 322). 'Fairly common on the hills near Mhow at the end of the rains.' (S. & B.)

The Indian Cuckoo. *Cuculus micropterus* (Gould).

Fairly numerous in the Vindhya Hills, calling during June and July. Not recorded at any other season.

The Common Hawk-Cuckoo or Brain-fever-Bird. *Hierococcyx varius* (Vahl.).

Fairly numerous in summer. It begins to call shortly before the rains break (June), but only comes into full 'song' after they have broken, and continues to call till well into September. An occasional bird may be heard calling in October. Not noted between October and the end of May, though whether this is due to its migrating or simply to the fact that it is not conspicuous during its silent season, is uncertain.

The Pied Crested Cuckoo. *Clamator jacobinus* (Bodd.)

A rains visitor, sometimes in considerable numbers. Earliest and latest dates seen : June 21 and Oct. 16. In 1928 this species occurred in very large numbers, in 1927 and 1929 in very much smaller numbers. Few seem to arrive before the beginning of July, or to remain after the end of September.

On 5-8-29 a juvenile was seen in an Acacia being fed by a pair of Large Grey Babblers.

The Koel. *Eudynamis scolopaceus* (Linn.).

Mainly a summer visitor, but a few stay throughout the winter. Even in winter it seems to be the first bird to wake up in the morning. It begins to call about the middle of March. It victimises both *Corvus coronoides* and *Corvus splendens*.

The Sirkeer Cuckoo. *Taccocua leschenaulti sirkee* (Gray).

Occasionally seen, chiefly in scrub-jungle. Appears to be resident.

The Coucal or Crow-Pheasant. *Centropus sinensis* (Stephen).

Numerous and resident. It breeds during the rains, and seldom calls at other times. A break of a few days in the rains silences it. The female has a very peculiar call used in courtship. The following is an extract from my diary for September 5:—'When I first saw them (*i.e.* a pair of Crow-Pheasants), they were both on the ground, the cock pursuing the hen, and the latter running with tail depressed and wings drooped. The male then flew into a tree, while the female remained standing on the ground, drooping and vibrating her wings, and constantly repeating a harsh cry—'Ske-e-e-a-aw'. After about two minutes the cock returned, and the hen, after another short pursuit, allowed herself to be captured, and the two mated, one of them giving voice to a low and melodious variation of the usual 'Whoot-whoot' note.

The Large Indian Paroquet. *Psittacula eupatria* (Linn.).

Small flock seen on the outskirts of Mhow 3-11-28, and a single bird on the same spot 15-7-29. No other record.

The Rose-ringed Paroquet. *Psittacula krameri* (Scop.).

Numerous and resident, but moves about locally in relation to food supply. Outside a small temple near Mhow it is the custom of the priest for a few weeks during the rains to put down grain for the paroquets each morning. On these occasions not less than two hundred gather together within a space not more than twenty feet square. No other species of Paroquet was noted feeding there, though it was in the trees just above the temple that the last species was seen. A pair of Jungle Crows occasionally joined the Paroquets at their meal, looking somewhat nervous in the middle of a green carpet of Paroquets. Eggs laid in February and March.

The Blossom-headed Paroquet. *Psittacula cyanocephala* (Linn.). ♀ 28-5-28.

Resident in small numbers, rarely coming near houses. The one specimen obtained was so young that it cannot have left the nest many days. Eggs are, therefore, probably, laid in April.

The Kashmir Roller. *Coracias garrula semenowi* (Loud. & Teshusi). ♀ 22-9-28, ♀ ? 27-9-29.

Numerous on passage about the end of September. Not noted on the spring passage.

The Indian Roller or Blue Jay. *Coracias benghalensis* (Linn.).

Resident. Not as numerous as in most parts of India. Appears to breed in April and again during the rains.

The European Bee-eater. *Merops apiaster* (Linn.).

Several birds which I am convinced belonged to this species, seen at Bircha 24-10-28. Unfortunately, no specimen could be obtained. No other record.

The Common Indian Bee-eater. *Merops orientalis* (Lath.).

Resident in small numbers. Very numerous in autumn and spring. The scarcity of suitable nesting sites probably accounts for the smallness of their numbers in the summer. When courting (about the end of March and

beginning of April), the cock frequently presents a wasp to the hen. The increase of numbers in the autumn begins towards the end of September, and lasts till about Christmas. The spring passage is less marked.

The Blue-tailed Bee-eater. *Merops superciliosus javanicus* (Horsf.). ♂ 19-8-29.

Appears to be entirely a passage migrant, very much more numerous in autumn than in spring. In spring it passes through Mhow in May. In the autumn it makes a longer stay, having been seen from Aug. 2 to Oct. 2.

The Pied Kingfisher. *Ceryle rudis* (Linn.).

Common over tanks, and occasionally seen fishing on small streams.

The Common Kingfisher. *Alcedo atthis* (Linn.).

Appears to be resident in small numbers. On more than one occasion when this species ventured to fish in a reach where a pair of White-breasted Kingfishers commonly fish for crabs, the latter attacked the former with great fury and drove him off.

The Stork-billed Kingfisher. *Ramphalcyon capensis* (Linn.).

One is generally to be seen over the river opposite the Residency grounds at Indore. S. & B. procured one at the Depalpure Lake.

The White-breasted Kingfisher. *Halcyon smyrnensis* (Linn.).

Numerous and resident, breeding in April. A pair seem to live permanently at the confluence of two small streams just outside Mhow. The streams are generally dry for the last three months before the breaking of the monsoon. So long as there is water in the stream the favourite diet of these Kingfishers seems to be crabs, though they have sometimes been seen to catch fish (*Chilwa*). Their method of dealing with a crab is to beat it to a pulp on a stone or the branch of a tree, and to swallow it whole. Any part that may have fallen off in the beating process, a claw, for example, is carefully retrieved and eaten afterwards. When the stream runs dry they take to a diet of crickets, etc., and in 1928, when water remained in the stream later than it does most years, they gave up fishing at the time they would normally be obliged to. A lady living in Mhow told me that one White-breasted Kingfisher used frequently to come and catch Goldfish from a small pond in her garden.

The Common Grey Hornbill. *Lophoceros birostris* (Scop.).

Appears to be migratory. Occasionally seen in the winter, frequently in spring and autumn, but only once between April 23 and September 16. It generally occurs in flocks of six. On the one occasion when one was seen in the summer, it was a solitary bird seen on June 10 in the Vindhya Hills just below Simrole.

The Hoopoe. *Upupa epops* (Linn.).

Resident in small numbers. Breeds in April and May. Its numbers are greatly increased in winter. The breeding birds, from their bright, chestnut colouring and the fact that there is no white between the chestnut of the head and the black of the crest I take to be *U. epops orientalis*. Many of the winter birds are paler in colour, and have a good deal of white in the crest. Unfortunately, no specimens were obtained.

The Alpine Swift. *Micropus melba* (Linn.).

A passage migrant, fairly numerous over tanks in February and March, and again in September.

The House Swift. *Micropus affinis* (Gray).

The chief breeding season is in April. Some stay for the winter, and appear to breed then, but the majority seem to leave Mhow about the end of October, returning at the beginning of March.

The Crested Swift. *Hemiprocne coronata* (Tickell).

General Betham in a letter, referring to Simrole, writes:—'The Crested Swift also hangs out there, but I was never fortunate enough to get eggs.' Lt. Young (*J. B. N. H. S.*, Vol. XVI, p. 514) states that he saw the species in the Nabadda Valley in March and April. I have no record of the species.

Franklin's Nightjar. *Caprimulgus monticolus monticolus* (Franklin). ♀ 6-8-28.

A summer visitor. They appear to arrive in April and leave about the end of August. The one place where, between those two months, one can always be certain of seeing this species is the channel for taking the overflow water from Bircha Lake. In July and August they occur there in flocks of eight or more. The only other place in the neighbourhood of Mhow where I have seen them is in scrub-jungle south of the Mhow-Simrole Road, where I put one up off two fresh eggs on 1-7-29.

The Common Indian Nightjar, *Caprimulgus asiaticus* (Lath.). ♂ 16-11-27; ♀ 22-6-28.

Fairly numerous in scrub-jungle, and occurs, though in smaller numbers, within the Cantonment. In summer after dark they frequently sit in the middle of the road, where it passes through scrub-jungle, and their large eyes reflect the lights of approaching cars long before their bodies become visible. Eggs laid in the latter half of June.

The Indian Barn-Owl. *Tyto alba javanica* (Gmel.).

Juvenile bird in captivity, which had been taken from a nest in the roof of occupied barracks some three months earlier, seen 25-12-27.

The only other record of the species is of one which came out of the Bagh Caves, about eighty miles W. S.-W. of Mhow, 23-4-29.

The Dusky Horned Owl. *Bubo coromandus coromandus* (Lath.).

Occasionally seen.

The Indian Spotted Owlet. *Athene brama* (Temm.).

Numerous and resident. Breeds in April.

The Osprey. *Pandion haliaëtus* (Linn.).

One fishing in Bircha Lake, 16-9-27. No other record.

Cinereous Vulture. *Egyptius monachus* (Linn.).

'I saw it . . . also at Mhow.' (Jerdon, Vol. I, p. 7.)

The Black Vulture. *Sarcogyps calvus* (Scop.).

One pair, never more, seen in almost every collection of vultures round a carcass.

The Indian Long-billed Vulture. *Gyps indicus* (Scop.).

More numerous than the last species, less so than the next.

The Indian White-backed Vulture. *Pseudogyps bengalensis* (Gmel.).

Resident and very numerous as a rule. All the last three species, however, deserted the district in June 1927, and only came back gradually in the autumn. The time they deserted the neighbourhood of Mhow was the time of heavy and destructive floods in Gujerat and Kathiawar, when there must have been an unusual quantity of food suitable for vultures in those parts. Whether there was any connection, it is impossible to say.

The Neophron or Scavenger Vulture. *Neophron percnopterus* (Linn.).

Common and Resident. Lt. Young found that in the Nabadda Valley in April there were nests of this species containing eggs on 'almost every suitable piece of cliff'. (*J. B. N. H. S.*, Vol. XVI, p. 515).

The Indian Tawny Eagle. *Aquila rapax vindhiana* (Frank.).

Resident, but not very numerous. Breeds in March. This species is frequently mobbed by kites.

The White-eyed Buzzard-Eagle. *Butastur teesa* (Frankl.) 0? 5-10-28; 0? 20-10-29.

Not very numerous, but appears to be resident. Lt. Young found a nest of this species containing one egg in the Narbadda Valley on April 5. (*J.B.N.H.S.*, Vol. XVI, p. 515).

The Pariah Kite. *Milvus migrans govinda* (Sykes).

Numerous and resident. This species seems to have a strong dislike for the Indian Tawny Eagle, and it is a common sight to see one of the latter being mobbed by kites. Eggs are laid in January and February, but kites may often be seen carrying sticks up into trees about the end of September. As the weather becomes colder, they cease from this practice, and do no more work on their nests till January.

The Black-winged Kite. *Elanus cæruleus* (Desf.).

S. & B. report having shot one at Mhow on September 25, and two at the Delapore Lake in December and January respectively.

The Pale Harrier. *Circus macrourus* (S. G. Gmel.).

Fairly numerous in winter. One was seen at Bircha as early as August 2, and again on August 9, but the majority do not appear to arrive before the end of September or the beginning of October.

The Marsh Harrier. *Circus æruginosus* (Linn.). ♀ 17-9-28.

This is the commonest of the harriers round Mhow, being particularly numerous in September and April. The stomach of the above-cited specimen contained the whole of a lark, apparently *Galerida deva*, with the exception of the head. It is seen in equal numbers over the swampy margins of *jhils*, cultivation, and dry pasture land.

The Indian Shikra. *Āstur badius dussumieri* (Temm.). 0? 12-10-27; ♂ 15-10-28.

Fairly common, more so in winter than in summer. The former of the above-mentioned specimens contained a snake $4\frac{1}{2}$ " long, a large, striped wasp, a very large beetle, and the remains of several fresh-water crabs.

The Besra Sparrow-Hawk. *Accipiter virgatus* (Temm.).

S. & B. Obtained two specimens at Mhow in October 1881. They saw no others.

The Shahin Falcon. *Falco peregrinus peregrinator* (Sund.).

Said by Jerdon to breed 'at the great waterfall at Mhow'. (Jerdon, Vol. I, p. 27). Presumably the waterfall referred to is that at Patalpani, about three miles out of Mhow. A pair of this species were circling round over it when I visited it on March 19, and on the face of the cliff on the side of the gorge opposite the fall, there was a site which had obviously been used for an eyrie for very many years. I did not observe the species elsewhere in the neighbourhood of Mhow. S. & B. state that a pair of this species frequented the same waterfall during the cold season of 1881.

The Laggar Falcon. *Falco jugger* (Gray).

Occasionally seen.

The Red-headed Merlin or Turumti. *Falco chiquera* (Dauden).

Occasionally seen, generally in pairs.

The Kestrel. *Falco tinnunculus* (Linn.). ♀ 24-2-28; ♂ 3-10-28; ♀ 9-2-29.

A winter visitor in considerable numbers. Earliest and latest dates recorded, September 22 and April 2. Crickets form a large part of their diet and they also seem to be partial to centipedes.

The Common Green Pigeon. *Crocopus phænicopterus* (Lath.).

Appears to be resident, but not in very great numbers. More often seen on the outskirts of jungle along the Simrole Road than anywhere else. Lt. Young found their eggs in the Narbadda Valley on March 28 and April 6. (*J. B. N. H. S.*, Vol. XVI, p. 514).

The Blue Rock-Pigeon. *Columba livia* (Gmel.).

Not as numerous as in many parts of India, possibly owing to the paucity of buildings suitable for nesting-sites. They appear to have no regular breeding season. One or more pairs were engaged in domestic duties in the tower of my church during most of the year.

The Indian Rufous Turtle-Dove. *Streptopelia orientalis meena* (Sykes).

'Very common at and near Mhow.' (S. and B.) I did not observe the species.

The Spotted Dove. *Streptopelia chinensis* (Scop.).

Resident, but more numerous in summer than in winter. Early in the rains it gathers into flocks up to about a dozen strong. About November the flocks disappear, and the numbers diminish.

The Brown Turtle-Dove. *Streptopelia senegalensis* (Linn.).

The commonest dove in the neighbourhood of Mhow. Breeds chiefly from March to May, and again, in smaller numbers, from September to November, i.e., before and after the rains.

The Indian Ring-Dove. *Streptopelia decaocto* (Frivalzsky).

Almost as numerous as the last species. Appears to breed at all seasons. In winter gathers into small flocks.

The Indian Red Turtle-Dove. *Enopopelia tranquebarica tranquebarica* (Henry). ♂ 21-9-27.

The least common of the doves about Mhow. It is mainly a summer visitor, only rarely being seen in winter; nest containing one egg found 30-3-29.

The Painted Sandgrouse. *Pterocles indicus* (Gmel.).

Resident, but more numerous in winter than in summer. On three occasions in July a pair were put up in scrub-jungle. Lt. Young took the eggs of this species on March 28 in the Narbadda Valley. (*J.B.N.H.S.*, Vol. XVI, p. 514). This suggests that the close season, which at present begins in Central India on April 1, might with advantage be put earlier.

The Coronetted Sandgrouse. *Pterocles coronatus atratus* (Hartert).

'Swinhoe obtained three specimens from Mhow in Dhar.' (*Fauna*, Vol. V., p. 268.)

The Common Sandgrouse. *Pterocles exustus* (Temm.).

Fairly common, particularly so in April. Jerdon says of this species, 'At Mhow—most of them leave the district after breeding in July and do not return till the end of the rains.' (Jerdon, Vol. II, p. 503).

The Peacock. *Pavo cristatus* Linn.

Never seen in cultivation, and not very common in jungle, as the species has been shot a great deal in the neighbourhood of Mhow. In 1928 a law was passed by the Indore Durbar making it illegal to shoot this species in Indore State. If this law is enforced, Peacocks may be expected to become very much more common.

The Red Spur-Fowl. *Galliperdix spadicea* (Gmel.).

'Seen in Vindhya Range.' (Jerdon, Vol. II, p. 542).

The Blue-breasted Quail. *Excalfactoria chinensis* (Linn.).

One seen about five miles south of Mhow, 8-5-29.

The Common Quail. *Coturnix coturnix* (Linn.).

Fairly numerous in the winter.

The Rain Quail. *Coturnix coromandelica* (Gmel.).

Not so numerous as the last species. Not observed in the summer.

The Jungle Bush-Quail. *Perdicula asiatica* (Lath.).

Very numerous in scrub-jungle in spring and summer. Less numerous in winter.

The Rock Bush-Quail. *Perdicula argoondah* (Sykes).

Appears to be resident in small numbers, and sometimes occurs in the same covey with the last species.

The Painted Bush-Quail. *Cryptoplectron erythrorhynchum* (Sykes).

A pair seen near Dunga gaon, about two miles from Mhow, 21-8-28.

The Painted Partridge. *Francolinus pictus* (Jard. and Selby).

Numerous in long grass, crops, and rushes.

The Grey Partridge. *Francolinus pondicerianus* (Gmel.).

Not so numerous as the last species, and keeps to drier ground as a rule.

The White-breasted Waterhen. *Amaurornis phoenicura* (Pennant).

Numerous on the river at Indore. The only other record is of one bird, possibly the same individual each time, which was always to be found by the Ghambier River just beyond the Mhow golf links in March 1928 and 1929.

The Brown Crike. *Amaurornis akool* (Sykes).

One was found sitting on six eggs in a nest built in a collection of flood-wrack in the top of a stunted Acacia on the bank of the Ghambier River, on Sept. 2. The nest was about four feet above the ground and about ten feet above the surface of the water. The bird sat very close, and used to allow me to watch her from a range of about three feet. This is probably the same bird that I had seen, without being able to identify it, skulking about by the stream at this point on a good many other occasions. The species was not observed elsewhere.

The Moorhen. *Gallinula chloropus* (Linn.).

Numerous on the river at Indore. Once or twice seen on the Ghambier River.

The Common Coot. *Fulica atra atra* (Linn.).

Very numerous on some tanks, and entirely absent from others apparently as suitable.

The Sarus. *Megalornis antigone* (Linn.).

Numerous at all seasons in all types of country except jungle. It is an irregular breeder, but by far the majority of eggs are laid in September.

The Likh or Floricane. *Sypheotides indica* (Gmel.).

Mainly a rains visitor in varying numbers. It was more numerous in 1928 than in 1927 or 1929. Eggs laid in August. 'Common during the rains, at which season it breeds but some of them remain in the neighbourhood of Mhow throughout the year.' (S. and R.)

The Stone-Curlew. *Burhinus oedicnemus* (Linn.). ♂ 13-2-28.

Seen occasionally, always on rocky hillside covered with a growth of young 'country teak', except once when several were feeding in swampy ground by the Bircha overflow.

The Indian Courser. *Cursorius coromandelicus* (Gmel.). ♂ 11-5-28.

Status doubtful. Frequently not seen for weeks together, while at other times it occurs in great numbers. Very large flocks seen near the 13th milestone on the Mhow-Neemuch Road on November 5 and 12, 1928.

The Pheasant-tailed Jacana. *Hydrophasianus chirurgus* (Scop.).

This species seems to be mainly, if not entirely, a spring and autumn visitor to the immediate neighbourhood of Mhow. It is very numerous on the shores of Bircha Lake during May. On 13-9-29, they were breeding in large numbers on the various tanks at Mandu, some sixty miles away.

The Red-wattled Lapwing. *Lobivanellus indicus* (Bodd.).

Very numerous and resident. Local name *Tituri*. The majority of eggs appear to be laid in May, but they may also be found in June and July, and probably in other months as well. All the 'nests' I saw in May, consisted of a depression in the ground, unlined, and fairly near water. A nest found on July 16, 1928, was, however, of a different type, and a description of it also covers several nests found after the breaking of the rains in the following year. It was situated on the top of a grassy mound, about ten yards from a stream, and the eggs reposed on a bed of gravel, evidently brought from the bed of the stream by the birds themselves. As the monsoon had broken about a month before, and rain was to be expected daily while the eggs were incubating, this arrangement seems to have been designed to provide drainage. For a bird that does no more normally than to make a scrape in the ground, to take special measures to meet special weather-circumstances, suggests a fairly high order of intelligence.

The Yellow-wattled Lapwing. *Sarciornis malabaricus* (Bodd.). ♀ 23-3-28.

Local name *Lauri*. Status uncertain, but it certainly breeds in the neighbourhood. Seen occasionally on barren ground, chiefly in spring and summer.

The Sociable Plover. *Chettusia gregaria* (Pall.).

'Seen at Mhow.' (Jerdon, Vol. II, p. 645).

The White-tailed Lapwing. *Chettusia leucura* (Licht.).

A small flock of birds which appeared to me to belong to this species were feeding near the Towers of Silence on the evening of May 26. I watched them for some time through field-glasses from a distance of from 150 to 200 yards. They were very shy, however, and would not allow me to approach within reasonable range to obtain a specimen.

Jerdon's Little Ringed Plover. *Charadrius dubius jerdoni* (Legge). ♀ (juv.) 16-7-28

Occasionally seen at Bircha in April and the rains. A pair seen there 22-4-27 were behaving as if they had eggs or young. Lt. Young found their eggs in the Narbadda Valley on May 5. (*J.B.N.H.S.*, Vol. XV, p. 514.)

The Black-winged Stilt. *Himantopus himantopus* (Linn.).

Common in winter, generally in pairs, but sometimes in flocks up to about twenty. Contrary to general belief, these birds are by no means bad eating.

The Common Sandpiper. *Tringa hypoleuca* (Linn.).

A winter visitor in small numbers.

The Wood-Sandpiper. *Tringa glareola* (Linn.).

Occasionally seen in winter.

The Green Sandpiper. *Tringa ochropus* (Linn.). ♂ 26-10-27; ♀ 15-8-28; ♀ (juv. by oviduct) 2-7-29.

A very numerous winter visitor. From September to April at least one is to be seen by every stagnant pool, and several along the margin of every *jhil*. In April they tend to gather into flocks, and their numbers are increased by the addition of birds on passage from further south. The last species sometimes mixes in these flocks. The majority have left by the end of April, but a few individuals, presumably non-breeders stay for the whole summer. By the middle of July their numbers begin to increase. A pair watched on March 2, were courting. One was displaying and the other apparently inviting his attentions. The former kept up a call quite unlike the usual call of the species, sounding rather like two flints being knocked together.

The Spotted Redshank. *Tringa erythropus* (Pall.). ♂, Manpur, 20-10-28.

Occasionally seen, always solitary, in winter.

The Redshank. *Tringa totanus* (Linn.).

A winter visitor in small numbers, occurring singly and in pairs.

The Greenshank. *Tringa nebularia* (Gunner). ♂ 19-11-28.

A winter visitor in larger numbers than either of the last species, usually seen in pairs.

The Little Stint. *Erolia minuta* (Leisler).

Occasionally seen in winter, and more frequently in March and April. Earliest date seen, Aug. 3.

Temminck's Stint. *Erolia temminckii* (Leisler). ♀ 9-5-28 ; ♀ 27-4-29.

More numerous than the last species, especially in April and May. During the winter they occur in small parties of about five, but towards the end of the season in pairs, which may often be seen courting.

Fantail Snipe. *Capella gallinago gallinago* (Linn.).

Fairly numerous in the winter.

The Pintail Snipe. *Capella stenura* (Bonaparte).

A winter visitor. I have been told that in the neighbourhood of Mhow the last species is more numerous from September to November, and the present species after November, but I cannot vouch for this personally.

The Painted Snipe. *Rostratula benghalensis* (Linn.).

Resident and fairly numerous, but subject to local movement as the swamps dry up.

The Black-headed Gull. *Larus ridibundus* (Linn.).

One seen over a tank about fifteen miles from Mhow, 26-11-28. No other record.

The Indian River Tern. *Sterna seena* (Sykes).

Fairly common over tanks in winter. Lt. Young saw a young bird of this species near Mhow on May 15. (*J.B.N.H.S.*, Vol. XVI, p. 516).

The Black-bellied Tern. *Sterna melanogaster*. (Temm.).

Also seen in winter, but less commonly than the last species.

The Indian Shag. *Phalacrocorax fuscicollis* (Steph.).

Resident in all suitable localities.

The Little Cormorant. *Phalacrocorax javanicus* (Horsfield).

Appears to be resident, but by no means so common as the last species.

The Indian Darter or Snake-Bird. *Anhinga melanogaster* (Pennant).

A pair to be seen on almost every tank at all seasons.

The White Ibis. *Threskiornis melanocephala* (Latham).

One seen by tank fifteen miles west of Mhow, 12-11-28, and one by the Narbadda at Barwani, 24-4-29.

The Spoonbill. *Platalea leucorodia* (Linn.).

Two or three at Barwani by the Narbadda River, 24-4-29.

The White Stork. *Ciconia ciconia* Linn.

Two or three by the Narbadda River at Barwani, 24-4-29.

The White-necked Stork. *Dissoura episcopa* (Bodd.).

Resident in small numbers.

The Black-necked Stork. *Xenorynchus asiaticus* (Lath.).

Occasionally seen.

The Open-bill. *Anastomus oscitans* (Bodd.).

Several by the Narbadda at Barwani, 24-4-29.

The Purple Heron. *Ardea purpurea* (Linn.).

One on island in Jeshwantnagar Lake, 20-8-28.

The Grey Heron. *Ardea cinerea* (Linn.).

Seen at all seasons, but most numerous in winter.

The Large Egret. *Egretta alba* (Linn.).

A pair seen over a tank about thirteen miles west of Mhow, 5-11-28. Not identified with certainty on any other occasion.

The Little Egret. *Egretta garzetta* (Linn.).

Fairly common at all seasons.

The Cattle Egret. *Bubulcus ibis*. (Linn.).

Occurs at all seasons, but a great increase in numbers takes place the day after the first rain of the monsoon falls. In the immediate neighbourhood of Mhow I have not found any colonies breeding, though in May I have seen them carrying sticks. Two nests in a tree on the platform of Rutlam Railway Station contained two and three fully-fledged young respectively on 3-8-28.

The Reef-Heron. *Demigretta sacra* (Gmelin.).

One seen flying high and steadily from the west about 7-30 a.m. on 8-10-29. On coming over the polo-ground it circled down and joined a party of Cattle Egrets which were feeding there. After feeding with them for about five minutes it flew off steadily due east, rising as long as I could see it.

The Pond Heron. *Ardeola grayii* (Sykes).

Common at all seasons wherever there is water.

The Night-Heron. *Nycticorax nycticorax nycticorax* (Linn.).

One seen by the Ghambier River, about five miles from Mhow, 23-9-29.

The Common Flamingo. *Phoenicopterus ruber* (Linn.).

One seen by the Narbadda, near Barwani, 24-4-29.

The Cotton Teal. *Nettapus coromandelianus* (Blanf. & Oates).

Seen occasionally on Bircha Lake, at Dhar, and Mandu. At the latter place they appeared to be breeding, 13-9-29.

The Bar-headed Goose. *Anser indicus* (Leatham).

One seen on a tank about thirteen miles west of Mhow, 5-11-28.

The Lesser Whistling Teal. *Dendrocygna javanica* (Horsf.).

Numerous at Bircha during the early part of the rains. Occasionally seen there and at Jeshwantnagar up to the end of September.

The Ruddy Sheldrake or Brahminy Duck. *Casarca ferruginea* (Vroeg.).

Not uncommon on the Narbadda in winter. Mr. M. Young reports having seen them there as late as April 14. (*J.B.N.H.S.*, Vol. XIV, p. 515.)

The Mallard. *Anas platyrhynchos* (Linn.).

A winter visitor in varying numbers. It was more numerous than usual in the winter of 1928-29, which was an abnormally cold winter over the whole of Northern India.

The Gadwall. *Chaulelasmus streperus* (Linn.).

A very numerous winter visitor.

The Common Teal. *Nettion crecca* (Linn.).

The most numerous member of the family in winter. Earliest date recorded, Sept. 16.

The Garganey or Blue-winged Teal. *Querquedula querquedula* (Linn.).

Occurs in winter, but is more numerous in the spring. Latest date seen, May 9.

The Shoveller. *Spatula clypeata* (Linn.).

Not uncommon in the winter. Mr. M. Young says:—'I saw one flock of seven Shovellers (*Spatula clypeata*) on April 14, and shot one which was quite good eating.' (*J.B.N.H.S.*, Vol. XVI, p. 515.)

The little Grebe or Dabchick. *Podiceps ruficollis*. (Vroeg.).

Resident in small numbers on permanent water. Never seen on tanks that dry up.